

Remarks

By the foregoing Amendment claims 14 and 15 are cancelled without prejudice for filing in a future application. Claims 1-13 are amended, and new claim 16 is added.

Election Pursuant to Restriction Requirement:

The Examiner has requested Restriction to one of the following inventions pursuant to 35 U.S.C. § 121:

- I. Claims 1-13, drawn to a method, classified in class 438, subclass 5.
- II. Claims 14-15, drawn to a product, classified in class 117, subclass 200.

Applicant hereby elects the invention of Group I, for prosecution in this case. Moreover, claims 14 & 15 have been canceled, thus the Restriction Requirement is moot.

Claim 3 has been objected for using the terminology "MO sources". Applicant has amended the claim to make the claim clear. Applicant believes the terminology is clear and readily understandable by one of ordinary skill in the art. In light of the amendment, Applicant requests reconsideration of the objection.

The Examiner has rejected claim 8, line 3 for the inclusion of "for example" as being unclear. Claim 8 has been amended to remove the reference and Applicant submits the claim is clear. Furthermore, Applicant added new claim 16.

The Examiner has rejected claim 1 as unclear for using the phrase "or the like". Applicant has deleted this phrase, and submits that claim 1 is now clear.

The Examiner has rejected claim 1, line 5 and line 10 for using the phrase "such as". Applicant has amended the claim and submits that the claim is now clear.

The Examiner has rejected claims 1-13 under 35 U.S.C. 103(a) as obvious in light of *Fielden et al.* (US 20020102749A1) published in the US on August 1, 2002. Applicant respectfully asks the Examiner to reconsider this rejection in view of the below Remarks.

Fielden relates to methods and systems for monitoring semiconductor fabrication. Such systems may include a stage configured to support a specimen coupled to a measurement device to perform inspection techniques.

The present invention is directed to a method of depositing an active layer where an electronic control unit forms modified process parameters from deviation values obtained upon growth of the calibrating layer with the aid of stored calibrating parameters, thereby controlling the heating of the process chamber, the flow controllers, and the pump upon growth of the active layer sequence.

Amended Claim 1, the only independent claim of the present invention, requires, among other elements, that after prior pyrolytic decomposition, the starting substances are deposited on the substrate and form an active layer. Thus, decomposition products of gaseous starting materials are deposited on a substrate to form the active layer. Nowhere does Fielden suggest the use of decomposition products to form the active layer, thus Fielden fails to teach each and every element of the claimed invention, and the claimed invention is not obvious. This is confirmed by the Examiner's admission that "Fielden et [al] does not mention pyrolytic decomposition . . ."

The only motivation that the Examiner has provided for finding the invention obvious in light of Fielden is that "it would have been obvious . . . to perform the Fielden process in MOCVD with pyrolytic decomposition in the invention of admitted prior art for the benefit of evaluating deposition layers grown by MOCVD technique." However, Applicant respectfully submits that the present invention requires more than an evaluation of deposition layers. The present invention provides a novel method of depositing an

active layer in a single run by predetermining process parameters and calibration parameters prior to depositing the layer of decomposed gaseous reactants; thus gaining the capability of modifying the active layer during the run. This is achievable by growing a calibration layer prior to the deposition layer in the same process. Fielden which relates to inspection techniques, either alone, or in combination with other references, fails to provide any motivation to modify an active layer of decomposed gaseous starting materials during the same run, thus the claimed invention is not obvious.

Moreover, combining the methods of Fielden and MOCVD technique could be achieved in numerous ways other than by the uniquely claimed steps and the Examiner has failed to cite motivation for one skilled in the art to arrive at the very precise method required by all claims of the present invention as opposed to any of the other possible steps. For example, Fielden teaches at paragraph 344 that the detector system may be coupled to a furnace. Thus, it is just as likely that the active layer could have been decomposed by heat after or subsequent to its deposition on a substrate. Applicant submits that the Examiner could not have cited motivation to create the active layer after prior pyrolytic decomposition, because no such motivation existed prior to Applicant's method which is the subject of the present application.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely claims 1-14, & 16 are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,



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